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**An NTM Database: A Compilation of Non-Tariff Measures for Analytical Purposes**

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# An NTM Database: A Compilation of Non-Tariff Measures for Analytical Purposes<sup>1</sup>

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## Abstract

This paper summarizes the primary elements of a database of non-tariff measures which has been developed goods and services. Each entry contains the following information: 1) country; 2) category; 3) generic/specific barrier; 4) sector/product; 5) source, and; 6) year. There are 53 countries and 15 categories in the database. Two-thirds of the countries have had non-tariff measures cited in the following categories, intellectual property rights (46), investment (40), standards, testing, certification and labeling (38), and services (37).

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<sup>1</sup> The original paper “A Multisource Inventory of NTMs for Analytical Purposes,” was presented at the APEC Capacity-Building Workshop on Quantitative Methods for Assessing NTMs and Trade Facilitation, October 8-10, 2003, Bangkok, Thailand.

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## An NTM Database for Analytical Purposes

### Overview

The Office of Economics of the U.S. International Trade Commission is conducting research with the objective to improve the quantification of the effects of non-tariff measures (NTMs) on trade flows and other economic variables.<sup>3</sup> A central feature of this effort is the generation of a global database of NTMs for products (both goods and services), including many countries in the Asia Pacific Economic Cooperation forum (APEC) and the proposed Free Trade Area of the Americas (FTAA).<sup>4</sup> This NTM database includes information that has been notified or alleged in 53 countries (Table 1). It also provides information on these goods and services products and on the sectors that are affected by NTMs as well as reference sources. The database is organized by country, category, generic/specific barrier, sector/product, source, and year. The various elements of the database are discussed and an overview of the data is presented.

The NTM database is contained in an Excel spreadsheet. The layout has six (6) columns that are labeled: country, category, generic/specific barrier, sector/product, source, and year. The database may be downloaded from the following link: <ftp://ftp.usitc.gov/pub/reports/studies/EC200406A.xls>

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<sup>3</sup> Inclusion of a citation or item in the database does not constitute an opinion regarding the WTO-consistency or lack thereof, discriminatory impact or lack thereof, or economic effect of that item. The intended purpose of the database is for general research into the economic effects of NTMs in support of the Commission's customers.

<sup>4</sup> The NTM database contains 3,531 entries for 53 countries and includes information for 19 of the 21 APEC countries and 14 of the 34 FTAA countries.

Table 1: Countries in the database

Argentina <sup>#</sup>	Hungary	Paraguay <sup>#</sup>
Australia <sup>*</sup>	Iceland	Philippines <sup>*</sup>
Azerbaijan	India	Poland
Bangladesh	Indonesia <sup>*</sup>	Romania
Brazil <sup>#</sup>	Israel	Russia <sup>*</sup>
Cameroon	Japan <sup>*</sup>	Singapore <sup>*</sup>
Canada <sup>*</sup> <sup>#</sup>	Kenya	South Africa
Chile <sup>*</sup> <sup>#</sup>	Korea (Republic of) <sup>*</sup>	Switzerland
China <sup>*</sup>	Libya	Taiwan <sup>*</sup>
Colombia <sup>#</sup>	Malaysia <sup>*</sup>	Thailand <sup>*</sup>
Costa Rica <sup>#</sup>	Mexico <sup>*</sup> <sup>#</sup>	Tunisia
Czech Republic	Morocco	Turkey
Ecuador <sup>#</sup>	New Zealand <sup>*</sup>	United States <sup>*</sup> <sup>#</sup>
Egypt	Nigeria	Uruguay <sup>#</sup>
European Union	Norway	Venezuela <sup>#</sup>
Gabon	Pakistan	Vietnam <sup>*</sup>
Guatemala <sup>#</sup>	Panama <sup>#</sup>	Zimbabwe
Hong Kong <sup>*</sup>	Papua New Guinea <sup>*</sup>	

<sup>\*</sup> APEC country

<sup>#</sup> FTAA country

Source: Compiled by USITC staff.

There are a number of other compilations which provide information on NTMs; however the present database is unique in its scope, content, and organization. More specifically, while other compilations contain many entries, each compilation differs in the definition of NTMs and is limited in the number of categories of barriers. This database provides information on fifteen (15) categories of non-tariff measures compared to fewer categories for the other compilations. In compiling the current database, information has been obtained from three (3) sources: 1) the Office of the United States Trade Representative's (USTR) National Trade Estimate Report on Foreign Trade Barriers; 2) the European Union's (EU) Market Access Database; and, 3) the World Trade Organization's (WTO) Trade Policy Reviews.<sup>5</sup> The information contained in the USTR's National Trade Estimate (NTE) report, as is the case also in the EU's Market Access Database (MA), relates to foreign trade measures as reported by government officials and company representatives to the U. S. and EU, respectively. In its Trade Policy

Review (TPR) the Secretariat of the WTO provides only the information reported to it on a country's trade regime.

There are strengths and limitations associated with each of the three reference sources. Each of these sources includes some of the same categories of NTMs; however, the descriptions of specific NTMs vary, as does their coverage. Some references contain information regarding only a few categories. For example, the EU's MA database contains information on NTMs for most countries prior to 2001, but includes only a few categories and provides only general information for each category. The WTO reviews countries with varying frequencies and does not assess all of them annually, and their TPRs do not provide information for every country that is considered in this current database. (The current database includes only information from TPRs conducted from 1998 to 2002.) The TPRs are most detailed for such categories as import prohibitions, quotas, licensing, and standards. For many countries, the USTR NTE report provides more in-depth information on the NTMs, than does either the EU or WTO source.

A major element of the current database—in addition to the specific country and product/sector information, as well as references—is the organization of the information into generic and specific barriers. There is no standard classification scheme for NTMs. However, several major different classifications have been developed by such as Robert Baldwin (1970, 1984),<sup>6</sup> UNCTAD (TRAINS, 2000), Deardorff and Stern (1985),<sup>7</sup> and OECD (2002).<sup>8</sup> A major problem with classifying NTMs is that the barriers cover

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<sup>5</sup> For access to the USTR database, see <http://www.ustr.gov/reports/index.shtml>; for the EU database, see <http://mkaccdb.eu.int/>; and for the WTO database, see [http://www.wto.org/english/tratop\\_e/tpr\\_e/tpr\\_e.htm](http://www.wto.org/english/tratop_e/tpr_e/tpr_e.htm).

<sup>6</sup> Baldwin, Robert E. (1984), "Trade Policies in Developed Countries," Chapter 12 in *Handbook of International Economics Volume 1: International Trade*, Jones, Ronald W., and Peter B. Kenen, eds., Elsevier Science Publishers, Amsterdam. Baldwin, Robert E. (1970), *Nontariff Distortions of International Trade*, The Brookings Institution, Washington, DC.

<sup>7</sup> Deardorff, Alan V., and Robert M. Stern (1997), "Measurement of Non-Tariff Barriers," University of Michigan, OECD/GD (97) 129.

a very broad range of policies and practices, especially if all measures—other than tariffs—that somehow impede trade or increase the cost of trading are included. NTMs can be transparent, i.e., rules or laws, including government regulations and policies and administrative procedures, or NTMs can be nontransparent, informal practices. Furthermore, although not every category of NTMs is evidenced in each country or is applicable to every sector and product there are similarities in the nature of generic barriers across categories, countries, sectors and products. For example, the generic barrier such as certification is reported as occurring in the following categories: 1) standards, testing, certification and labeling, 2) sanitary and phytosanitary requirements, 3) services, 4) import licensing, 5) customs, and 4) exports.

The NTMs included in this database comprise both government regulations (e.g., customs regulations) and policies (e.g., investment-related measures), and informal barriers and practices (e.g., nontransparency, arbitrary enforcement, corruption). Each of the barriers identified may affect different sectors and different tariff lines. For example, some countries may have regulations which affect only a few sectors or tariff lines while they have informal practices such as inadequate enforcement of anticompetitive practices or corruption which act as barriers to imports in many sectors.

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<sup>8</sup> Fleiss, Barbara (2002), Trade Directorate, OECD, Paris, “Work at OECD on NTMs,” WTO Seminar on Market Access, Geneva, May 30.

Table 2 presents the fifteen (15) categories of NTMs which are identified in the current database. Most of the categories can be found in other compilations, except for taxes.

Table 2: Categories

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anticompetitive practices / competition policy
corruption
customs
exports
government procurement
import licensing
import prohibitions
import quotas
intellectual property rights
investment
sanitary and phytosanitary requirements
services
standards, testing, certification and labeling
state-trading
taxes

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Source: Compiled by USITC staff.

### **Explanation of Terminology and Composition of the Database**

The counts provide are those of entries and must be interpreted with caution, since the source data reflect government and business concerns about access to large world markets, and perhaps most likely to readily identifiable policies. Problems of access in the smaller markets of developing countries may be under-represented and those of less transparent problems may likely be under reported. In particular, strong inferences about the prevalence or severity of particular types of measures based on comparative counts of entries in the database should not be made. The counts presented are only for illustrative purposes.

There are 3,531 individual entries in the database, including many related to various agricultural and services' products. Each entry includes information regarding: 1) the country; 2) the NTM category; 3) the generic/specific barrier; 4) the sector/product; 5) the source from which the information was extracted, and; 6) the date of that source. One example of an entry would be: 1) Australia; 2) sanitary and

phytosanitary requirements; 3) inspection; 4) fruit (apples); 5) USTR, and; 6) 2002. In some cases the description of the sector is listed as “horizontal” if the NTM covers many or all sectors or products. Individual generic barriers are aggregated into NTM categories; however any generic barrier can appear in more than one of the NTM categories. The purpose for constructing this database was to identify policies that influence industrial and agricultural market access so as to be able to utilize the information in economic modeling.

This database of NTMs is not designed to be a classification system, but rather it was constructed so as to be useful in modeling the impacts of barriers to trade. And, while there is no unique aggregation scheme defined for the data, the data can be grouped in many different ways. Some examples of these different are provided later in the paper.

Many NTM categories are affected by the same generic barriers or specific measures and therefore, generic barriers and specific measures appear across the range of NTM categories. The same is true for specific measures. These situations arise because the NTM categories do not relate either to particular products or to specific industries. A particular generic barrier that requires the certification of a foreign licensed accountant whose services are a specific services’ product, might be thought to be unique to the “services” NTM category, however this particular barrier actually appears in that category and in three (3) other NTM categories as well, i.e., “standards, testing, certification and labeling,” “import prohibitions,” Several other examples of generic barriers which cross NTM categories are presented in Table 3, e.g., some form of “approval” is reported in the NTM categories: 1) “import licensing;” 2) “sanitary and phytosanitary requirements,” and; 3) “standards, testing, certification and labeling,” 4) “services;” 5) “exports;” 6) “investment,” and; 7) “customs.” It is quite likely that the approval process and its impact differ among these categories. Other examples provided refer to the generic barriers of “licensing,” and “prohibitions.”



Table 3: Examples of NTM category complaints mapped to a generic barrier

Category	entries	Generic barrier	entries
approval			
investment	9		
services	9		
exports	5		
customs	3		
standards, testing, certification and labeling	3		
		total approval	29
certification			
standards, testing, certification and labeling	78		
sanitary and phytosanitary requirements	27		
services	4		
import licensing	3		
customs	2		
exports	2		
		total certification	116
licensing			
import licensing	286		
exports	83		
services	23		
import prohibitions	5		
investment	5		
standards, testing, certification and labeling	5		
corruption	1		
customs	1		
		total licensing	409
prohibited			
import prohibitions	329		
exports	82		
investment	57		
services	46		
sanitary and phytosanitary requirements	20		
import licensing	16		
customs	7		
standards, testing, certification and labeling	3		
anticompetitive practices / competition policy	1		
		total prohibited	561

Source: Compiled by USITC staff.

Another aspect of the USITC database is the detail provided on the specific sectors and products affected by NTMs. The USITC database contains both industrial sectors, e.g., motor vehicles

(automobiles) and services' sectors, e.g., professional services, financial services, as well as specific products such as alcoholic beverages (wine) and margarine. Sectors and products are affected by more than one NTM. For example, a product such as wheat may be affected by import prohibitions as well as state-trading. Many sectors or products are affected by the similar NTMs. For example, imports of cosmetics, medical equipment, and lighting fixtures are each affected by required inspections in some countries.

## **Data Summaries**

### Categories of NTMs

It is noted that some NTM categories are more frequent identified among the 53 countries in the preliminary database than are others. According to the following tabulation, the data indicate that 46 countries were cited as having some inadequacy with regard to intellectual property rights protection—the greatest number of countries so notified. The next most widespread NTM categories were “investment” (40 countries), “standards, testing, certification and labeling” (38), “services” (37), and “import prohibitions” (34). “Corruption” was cited least, in only 15 countries.

Table 4: Entries

Category	NTM database		APEC		FTAA	
	entries	countries	entries	countries	entries	countries
exports	441	33	188	13	46	9
standards, testing, certification and labeling	436	38	262	15	139	10
import licensing	416	30	244	12	54	7
services	357	37	203	15	104	9
import prohibitions	335	34	164	16	79	11
investment	308	40	202	15	52	11
intellectual property rights	267	46	116	18	78	13
customs	261	32	172	11	179	11
state-trading	176	28	74	11	12	5
sanitary and phytosanitary requirements	159	25	67	12	60	8
government procurement	116	33	56	11	22	8
import quotas	97	17	67	8	18	4
taxes	71	17	19	7	19	6
anticompetitive practices / competition policy	58	17	37	8	8	4
corruption	33	15	10	4	6	3

Source: Compiled by USITC staff.

For the database as a whole, the measures with the greatest number of entries are found in the “exports,” “standards, testing, certification and labeling,” and “import licensing” categories. With regard to the standards, testing, etc. category, technical regulations, standards, and conformity assessment procedures are covered under the WTO Agreement on Technical Barriers to Trade (“TBT Agreement”).<sup>9</sup> The TBT Agreement provides for certain exceptions to international standards for specific, legitimate objectives such as “to ensure the quality of ... exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices” whenever international standards do not exist or are inadequate.<sup>10</sup>

The above categories do not necessarily reflect the way in which issues may be raised in trade negotiations. Several of the categories refer to topic areas as referenced in the Doha Declaration under

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<sup>9</sup> WTO, “Agreement on Technical Barriers to Trade,” *The Results of the Uruguay Round of Multilateral Trade Negotiations* (Geneva: WTO, 1995.) See, for example, the Preamble and TBT Article 1 (General Provisions), at Art. 1.6.

<sup>10</sup> WTO, “Agreement on Technical Barriers to Trade,” *The Results of the Uruguay Round of Multilateral Trade Negotiations* (Geneva: WTO, 1995), TBT Art. 1; and additional information from WTO, “Agreement on

areas other than “industrial market access.” Four other of the categories (intellectual property rights, investment-related measures, government procurement, and competition policy) are referenced under major headings of the Declaration, one (customs procedures) is arguably related to “trade facilitation” by reference to particular GATT articles, and one (sanitary and phytosanitary standards) is referenced in Doha under “trade and environment.” Thus, terminology and compilation schemes obviously differ.

#### Sectors and products

The count of leading products and sectors in the database is presented in Table 5. Most of the NTMs pertain to goods, however services’ products, which include: 1) professional services; 2) media services; 3) financial services; 4) recordings; 5) telecommunications services; 6) transportation services, and; 7) computer software, report a total of 556 NTMs.<sup>11</sup> In constructing the database clearly related sectors and products have been grouped together and an attempt to standardize the nomenclature was made. No attempt has been made to exclude entries referring to policies which may be WTO-consistent, or are related to obvious health, safety, or national security concerns.

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Technical Barriers to Trade,” found at Internet address [http://www.WTO.org/english/docs\\_e/legal\\_e/17-tbt.pdf](http://www.WTO.org/english/docs_e/legal_e/17-tbt.pdf), retrieved on Aug. 26, 2002.

<sup>11</sup> It is noted that the “services” category has only a total of 357 entries and some of these refer to NTMs on goods not on services’ products.

Table 5: Sectors and products	entries
horizontal	428
professional services	154
media services	118
pharmaceuticals	110
meat	99
grains	95
motor vehicles and parts	93
textiles and apparel	93
financial services	92
animals	80
alcoholic beverages	79
equipment	75
fruit and fruit products	69
agricultural products	68
weapons	68
animal products	67
food and products	55
recordings (audio and video)	53
telecommunication services	54
transportation services	49
fish and fish products	45
wood and wood products	47
chemicals	41
petroleum and petroleum products	40
computer software	38
diary products	32
dietary supplements	31
electrical and electronic products	30
seeds	22
footwear and parts	19
fertilizers	16
medical devices	16
toys	16
tires	12
cosmetics	11
eggs and egg products	11

Source: Compiled by USITC staff.

### Services product NTMs

There are a large number of different service sectors affected by NTMs. According to the database, there are many different services products enumerated in the NTM database that are affected by NTMs. For example, 11 NTMs on service products were identified as present in the category “anticompetitive practices/competition policy,” 3 in “corruption,” etc. (Table 6).

Table 6: Services product NTMs

Category	NTM	APEC	FTAA
	database entries	entries	entries
services	281	163	91
intellectual property rights	102	50	30
investment	87	62	18
state-trading	29	4	1
government procurement	21	14	4
anticompetitive practices / competition policy	11	10	5
import licensing	8	7	0
standards, testing, certification and labeling	6	6	4
import prohibitions	4	4	2
corruption	3	0	1
exports	3	1	0
customs	2	2	2
sanitary and phytosanitary requirements	1	0	1
Total services product NTMs	558	323	159

Source: Compiled by USITC staff.

### Horizontal NTMs

Many (428) categories of NTMs are horizontal, that is, they affect many or almost all products. This appears to be particularly true of “Government procurement,” “Customs,” “Investment,” “Exports,” “Intellectual property rights,” and “Anticompetitive practices/competition policy,” “Standards, testing, certification and labeling,” while often cited as “horizontal,” more often affect specific products or sectors.

Table 7: Horizontal NTMs

Category	NTM		
	database entries	APEC entries	FTAA entries
customs	69	24	13
exports	66	18	7
government procurement	65	21	12
investment	61	28	10
intellectual property rights	48	11	18
standards, testing, certification and labeling	37	14	3
anticompetitive practices / competition policy	21	13	1
corruption	13	3	2
import licensing	10	0	4
import prohibitions	10	7	0
services	9	4	7
taxes	8	3	4
state-trading	6	4	0
sanitary and phytosanitary requirements	5	2	2
Total horizontal NTMs	428	152	83

Source: compiled by USITC staff.

Some additional insights can be gained from looking at multiple citation patterns relating to major categories of NTMs to products, such as was presented in Table 6. For example,

- \$ Motor vehicles and parts are particularly affected by import licensing, import prohibitions (particularly for parts and used vehicles) and import quotas.
- \$ Import licensing also affects chemicals, petroleum, equipment and machinery, agricultural products, grains, fruit, vegetables, plants, fish, and weapons.
- \$ Chemicals, pharmaceuticals, recordings (audio and video), and computer software are particularly affected by reported abuse of intellectual property rights.

- \$ Pharmaceuticals are also affected by product standards in many countries, as are cosmetics, equipment, motor vehicles, and textiles.
- \$ Customs procedures are particularly important for textiles and footwear.
- \$ Sectoral entries for investment-related measures refer primarily to services, i.e., media services, financial services, professional services, transportation services, and telecommunication services. Significant references for industrial products include motor vehicles and weapons. Land, fisheries, and forestry sectors.

In conclusion, the NTM database was constructed to be used in quantitative studies therefore no conclusions should be drawn based on the contents of the database although a summary of the data has been provided here. The most frequently cited non-tariff measures *overall* are in the category “exports,” which should not be surprising because this category may affect all goods and services products. Finally, the data show that a very large number of services sectors are currently affected by NTMs. The services sectors range across broad areas such as professional services, financial services, telecommunication services, and transportation services.